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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,072	06/19/2003	Jean-Philippe Girard	BIOBANK.009CP1	5184

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EXAMINER

YAO, LEI

ART UNIT	PAPER NUMBER
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1642

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/23/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/23/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
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Office Action Summary	Application No.	Applicant(s)	
	10/601,072	GIRARD ET AL.	
	Examiner	Art Unit	
	Lei Yao, Ph.D.	1642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-84 and 92-98 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 and 29-84 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-28 and 92-98 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>notice to comply</u> . |

Response to Argument and Amendment

The Amendment filed on 1/29/2007 in response to the previous Non-Final Office Action (7/27/2006) is acknowledged and has been entered.

Claims 15 and 23-28 have been amended. Claims 85-91 are cancelled. Claims 92-98 are added. Claims 1-84 and 92-98 are pending. Claims 1-14 and 29-84 have been withdrawn for non-elected invention. Claims 15-28 and 92-98 with species CCL5 and SLC/CCL21 are under consideration.

Sequence Requirements

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 C.F.R. § 1.821(a)(1) and (a)(2). This application fails to comply with the requirements of 37 C.F.R. §§ 1.821-1.825. The disclosure contains sequences that need SEQ ID numbers for figures 9, 10, 18 etc. For example, figure 9 disclose sequence with gene bank accession number. Those sequences need SEQ ID number corresponding to the sequence or gene bank accession number. If these sequences are found in the sequence listing filed 12/10/2002, applicants need only insert the appropriate SEQ ID Nos. However, if these sequences are not part of the listing, then Applicants need to comply with the sequence rules. Applicant is reminded to check the entire disclosure to ensure that the application is in sequence compliance. Any questions regarding compliance with the sequence rules requirements specifically should be directed to the departments listed at the bottom of the Notice to Comply (see attached form, PTO L90).

Priority

It is noted that examiner has established the effective priority dated of June 19, 2003, the filing dated of the instant application and applicant does not argue the priority.

Rejections Withdrawn

The rejection of claims 15-28 under 35 U.S.C. 112, second paragraph, as being indefinite for the term "an effective amount of agent comprising a polypeptide" is withdrawn in view of the amendments to the claims.

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Response to Arguments**Rejection under 35 USC § 112, first paragraph****Written description- agent comprising THAP-1 variants:**

Claims 15-28 remain and newly added claims 92-98 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement stated as below.

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

In the instant case, the claims are drawn to a method of inhibiting the activity of a chemokine comprising contacting the chemokine with an agent comprising polypeptides THAP-1, polypeptide having at least 30% amino acid identity to THAP-1, a polypeptide having at least 30% amino acid identity to THAP-1, and a polypeptide having at least 30% of amino acid identity to chemokine-binding domain comprising amino acid 143-213 of SEQ ID NO: 3, wherein the activity of said chemokine is inhibited. Thus, the claims are an inclusive of a genus of chemokine binding or inhibiting agents or peptides comprising THAP-1 polypeptide variants and homologs, or any chemokine binding agent having a 30% amino acid identity to chemokine binding domain of THAP-1 without defining the structure of the agent or the peptides. However, the written description (specification, page 230-232, example 14-17) only reasonably set forth a polypeptide at amino acid residues 143-213 of THAP1, SEQ ID NO: 3, that is associated with a chemokine SLC/CCL21 binding activity and THAP1 protein that is associated with binding CCL5 and SLC/CCL21 chemokines to inhibit chemokine activity (example 34-37, page 252-259). The written description does not provided any teaching that any other agent comprising any other peptide of fragment variants of THAP-1 that at are 30% identity to the binding domain of THAP1 that bind to any chemokine including claimed chemokines, CCL5 and SLC/CCL21, and inhibit the activity of chemokine.

A description of a genus may be achieved by means of a recitation of a representative number of species falling within the scope of the genus or by describing structural features common the genus that "constitute a substantial portion of the genus." See University of California v. Eli Lilly and Co., 119 F.3d 1559, 1568, 43 USPQ2d 1398, 1406 (Fed. Cir. 1997): "A description of a genus of cDNAs may be achieved by means of a recitation of a representative number of cDNA, defined by nucleotide sequence, falling within the scope of the genus or of a recitation of structural features common to the members of the genus, which features constitute a substantial portion of the genus." The Federal Circuit has recently clarified that a DNA molecule can be adequately described without disclosing its complete structure. See Enzo Biochem, Inc. V. Gen-Probe Inc., 296 F.3d 1316, 63 USPQ2d 1609 (Fed. Cir. 2002). The Enzo court adopted the standard that the written description requirement can be met by "show[ing] that an invention is complete by disclosure of sufficiently detailed, relevant identifying characteristics. i.e., complete or partial structure, other physical and/or chemical properties, functional characteristics when coupled with a known or disclosed correlation between function and structure, or some combination of such characteristics." Id. At 1324, 63 USPQ2d at 1613.

The court has since clarified that this standard applies to compounds other than cDNAs. See University of Rochester v. G.D. Searle & Co., Inc., ___ F.3d ___, 2004 WL 260813, at *9 (Fed.Cir.Feb. 13, 2004). The instant specification fails to provide sufficient descriptive information, such as definitive structural or functional features that are common to the genus. That is, the specification provides neither a representative number of polypeptide variants of THAP1 having a 30% identity to chemokine binding domain of THAP1 that encompass the genus that reveal the roles of these polypeptides in the binding to chemokines comprising CCL5 and SLC/CCL21 nor does it provide a description of structural features that are common to the chemokine binding domain of THAP1 comprising amino acids 143-213 of SEQ ID NO: 3) that bind to a chemokine comprising CCL5 or SLC/CCL21. Since the disclosure fails to describe the common attributes or characteristics that identify members of the genus, and because the genus is highly

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variant, the disclosure of *the* species of the polypeptide, THAP1 protein or 143-213 of SEQ IDNO: 3 is insufficient to describe the genus. Thus, one of skill in the art would reasonably conclude that the disclosure fails to provide a representative number of species to describe and enable the genus as broadly claimed.

Vas-Cath Inc. v. Mahurkar, 19USPQ2d 1111, clearly states "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of *the invention*. The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed*." (See page 1117.) The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (See *Vas-Cath* at page 1116). As discussed above, the skilled artisan cannot envision the detailed chemical structure(s) and functional attribute(s) of the encompassed genus of polypeptides, and therefore conception is not achieved until reduction to practice has occurred, regardless of the complexity or simplicity of the method of isolation. Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method of isolating it. The compound itself is required. See *Fiers v. Revel*, 25 USPQ2d 1601 at 1606 (CAFC 1993) and *Amgen Inc. v. Chugai Pharmaceutical Co. Ltd.*, 18 USPQ2d 1016.

One cannot describe what one has not conceived. See *Fiddes v. Baird*, 30 USPQ2d 1481 at 1483. In *Fiddes*, claims directed to mammalian FGF's were found to be unpatentable due to lack of written description for that broad class. The specification provided only the bovine sequence.

Therefore, only the method of inhibiting the activity of CCL5 or SLCCCL21 by contacting the polypeptides consisting of amino acid sequence 143-213 of SEQ ID NO: 3 binding to SLC/CCL21 and THAP1 protein binding to CCL5 and SLC/CCL21, but not the full breadth of the claims, meets the written description provision of 35 U.S.C. §112, first paragraph. Applicant is reminded that *Vas-Cath* makes clear that the written description provision of 35 U.S.C. §112 is severable from its enablement provision (see page 1115).

The response filed 1/29/07 has been carefully considered but is deemed not to be persuasive.

Applicant argue a series of support for the claims by the specification, such as figures 8 and 10 of alignment of the domains of 12 human THAP family polypeptides from 30% to 95% amino acid sequence identity to THAP1 and fully length sequence set forth as SEQ ID NO: 3-14 the chemokine-binding domain, and fragment from 10-210 consecutive amino acids of THAP-family polypeptides (page11-15). Applicant also states that the instant specification describes all possible portion or fragments of any of the THAP family polypeptides described therein and further states the fragment having more than 63 amino acids is 30% identity to the full-length human THAP1 polypeptide. In response to this argument, claimed invention is drawn to a method of inhibiting the activity of a chemokine with an agent comprising a polypeptide of THAP1, homology having 30% identity to the polypeptide of THAP1, a chemokine-binding domain of THAP1, wherein the activity of the chemokine is inhibited. Although the specification provides description of the materials used in the method, such as polypeptide of THAP, homology, chemokine binding domain, it does not provide teaching that all these polypeptides of THAP could bind to chemokine and inhibit the activity of the chemokine. It does not provide any teaching showing the common binding domain of chemokines for any THAP binding comprising wild type of THAP1 and fragment 143-213 of

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THAP1. Description of inhibiting chemokine SLC/CCL21 binding and inhibition for chemotaxis to endothelial cells by THAP1 could not convince one skilled in the art that the inventor(s), at the time the application was filed, have possession of the broadly claimed invention using any THAP fragment, homologs, variants listed in the specification. Applicant did state that amino acid sequence of 143-213 of THAP1 is critical element for the SLC/CCL21 chemokine binding, which results in the inhibition of the chemotaxis function of the chemokine (example 33-34). However, as described in figure 8, 9, and 12, not all the THAP1 fragments, homologs, or variants contain such sequence or the binding domain, therefore, they do not have SLC/CCL21 binding or inhibitory function. Moreover, the specification does not teach that all the tested chemokines listed on page 255 bind to THAPs, fragments, variants and their functions being blocked. Thus, the specification does not provide enough description for the claimed method, as stated in the previous office action, conception is not achieved until reduction to practice has occurred. Thus, Applicant's argument has not been found persuasive, and the rejection is maintained.

Enablement- agent comprising THAP-1 variants:

Claims 15-28 remain and newly added claims 92-98 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method of inhibiting chemokine activity by contacting a polypeptide of amino acid residues 143-213 of THAP1 (SEQ ID NO: 3) that binds to SLC/CCL21 and THAP1 protein (SEQ ID NO: 3) that binds to CCL5 and SLC/CCL21, does not reasonably provide enablement for A) the method by contacting any other agent comprising any other THAP (fragments or variants) and B) the method by contacting the chemokine binding domain comprising amino acids 143-213 of THAP of SEQ ID NO:3 to any chemokine other than CCL5 or CCL21 as stated below.

The factor considered when determining if the disclosure satisfies the enablement requirement and whether any necessary experimentation is undue include, but are not limited to: 1) nature of the invention, 2) state of the prior art, 3) relative skill of those in the art, 4) level of predictability in the art, 5) existence of working examples, 6) breadth of claims, 7) amount of direction or guidance by the inventor, and 8) quantity of experimentation needed to make or use the invention. *In re wands*, 858 F.2d 731, 737.8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

The claims are broadly drawn to a method of inhibiting the activity of a chemokine comprising contacting a chemokine with an agent comprising polypeptides having at least 30% amino acid identity to chemokine-binding domain of amino acid residues 143-213 of SEQ ID NO: 3, wherein the activity of said chemokine is inhibited. However, the specification, on page 230 (example 15-17) only teach a polypeptide at

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amino acid residues 143-213 of THAP1, SEQ ID NO: 3, that is associated with a chemokine SLC/CCL21 binding and on p252-259 (example 32-37) teach that THAP1 protein is associated with SLC/CCL21 and CCL5 binding and inhibition of the chemokine activity. The specification does not provide any teaching or working example to show that any other agents comprising any polypeptide variant of THAP-1 having a 30% identity to the chemokine binding domain of 143-213 of SEQ ID NO: 3 that is associated with chemokine binding and inhibiting the activity of the chemokine. The specification also fails to provide any teaching or working example to show the chemokine binding domain of amino acid residues 143-213 of THAP1, SEQ ID NO: 3, or THAP1 protein self having a binding ability to all of the chemokines.

It is also known in the art that even a single modification or substitution in a protein sequence can alter the protein function. Protein chemistry is probably one of the most unpredictable areas of biotechnology. For example, the replacement of a single lysine at position 118 of the acidic fibroblast growth factor by a glutamic acid led to a substantial loss of heparin binding, receptor binding, and biological activity of the protein (Burgess et al, Journal of Cell biology, Vol 111, p2129-2138, 1990). Removal of the amino terminal histidine of glucagons substantially decreases the ability of the molecule to bind to its receptor and activate adenylate cyclase (Lin et al Biochemistry USA, vol 14, p1559-1563, 1975). These references demonstrate that even a single amino acid substitution or what appears to be an inconsequential chemical modification, will often dramatically affect the biological activity of the protein.

Since the specification does not provide claimed method of inhibiting the activity of a chemokine by contacting a chemokine with an agent comprising a polypeptide having 30% identity to the chemokine binding domain comprising amino acid 143-213 of THAP1 (SEQ ID NO:3) or by contacting chemokine binding domain of THAP1 comprising amino acid 143-213 of THAP1 or THAP1 protein to any chemokine other than CCL5 or SLC/CCL21, since the specification does not provide any guidance for how to use the claimed method, one skilled in the art would not know how to use the claimed agent comprising polypeptide variants of chemokine binding domain of THAP1 for inhibiting the chemokine activity on the basis of teachings in the prior art or instant specification.

In view of the lack of guidance, lack of examples, and lack of predictability associated with inhibiting chemokine activity by binding to a chemokine with a agent comprising THAP1 chemokine binding domain variants, one skilled in the art would be forced into under experimentation in order to practice the broadly claimed invention. If Applicants has any objective evidence contrary to the rejection, Applicant is invited to submit it to the Office for reconsideration.

The response filed 1/29/07 has been carefully considered but is deemed not to be persuasive.

The response states that the specification describes THAP1 polypeptide and thousands of species of polypeptides having at least 30% amino acid identity to THAP and chemokine binding and further states that specification provides working example (15-17, 32, and 33) that demonstrate binding chemokine to THAP1 and fragments and conclude that these examples describe routine procedure that one of ordinary skill in the art can use to determine whether any THAP1, fragments, or variants, binds to one or more chemokine (page 15-16). In response to this argument, claimed invention is drawn to a method of inhibiting the activity of a chemokine (not a test procedure) with an agent comprising a polypeptide of THAP1, homology, a chemokine-binding domain of THAP1, wherein the activity of the chemokine is inhibited. Description of binding a THAP1 to the chemokine listed in figure 12 and 19 does not always result to inhibition of chemokine's activity of the claimed method. The specification as filed only describes that one chemokine, CCL21/CCL19, binds to THAP1 oligomeric and blocks the activity of lymphocyte adhesion to and chemotaxis through endothelial cells (example 34 and 35). The specification does not

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teach any other chemokines having such activity, although the bindings a few more chemokines are described in figure 19. Because interaction of two proteins do not always result loss of the function of one or two proteins, bindings of CCL5 CXXL9 or CXXL10 with GST-THAP1 (figure 19) do not teach or suggest that the functions of CCL5 CXXL9 or CXXL10 are inhibited by THAP1. Therefore, disclosed binding property between THAP1 and some of the chemokines does not convince one skilled in the art that the binding would result in the inhibition of chemokine functions. Because of the nature of the invention and unpredictable result and because instant specification does not provide the guideline and direction of the inhibition of the activity for each specific chemokine having adhesion and chemotaxis function for different cells expressing different chemokine receptor, undo experimentation would be enforced before one skilled in the art practice claimed invention.

Applicant also argues that routine method to demonstrate that such polypeptide inhibits the chemokine activity in both in vitro and in vivo in copending application 11/360450, which claims priority to the instant application. Applicant is reminded "to overcome a *prima facie* case of lack of enablement, applicant must demonstrate by argument and/or evidence that the disclosure, as filed, would have enabled the claimed invention for one skilled in the art at the time of filing (MPEP 2164.05). Thus, Applicant's argument has not been found persuasive, and the rejection is maintained.

Conclusion

No claims are allowed.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, which has been discussed in the previous office action.

THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action

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is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lei Yao, Ph.D. whose telephone number is 571-272-3112. The examiner can normally be reached on 8am-6.00pm Monday-Thursday.

Any inquiry of a general nature, matching or file papers or relating to the status of this application or proceeding should be directed to Kim Downing for Art Unit 1642 whose telephone number is 571-272-0521

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shanon Foley can be reached on 571-272-0898. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lei Yao,
Examiner
Art Unit 1642

LY


SHANON FOLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

Notice to Comply	Application No. 10601072	Applicant(s) Girard et al	
	Examiner Lei Yao	Art Unit 1642	

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

Applicant must file the items indicated below within the time period set the Office action to which the Notice is attached to avoid abandonment under 35 U.S.C. § 133 (extensions of time may be obtained under the provisions of 37 CFR 1.136(a)).

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

- ☐ 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to the final rulemaking notice published at 55 FR 18230 (May 1, 1990), and 1114 OG 29 (May 15, 1990). If the effective filing date is on or after July 1, 1998, see the final rulemaking notice published at 63 FR 29620 (June 1, 1998) and 1211 OG 82 (June 23, 1998).
- ☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).
- ☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).
- ☐ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing."
- ☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).
- ☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable from of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).
- ☒ 7. Other: need SEQ ID numbers for sequences in figure 219, 10, 18 etc.

Applicant Must Provide:

- ☐ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
- ☒ An initial or substitute paper copy of the "Sequence Listing", **as well as an amendment specifically directing its entry into the application.**
- ☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

For Rules Interpretation, call (703) 308-4216 or (703) 308-2923

For CRF Submission Help, call (703) 308-4212 or 308-2923

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